Freshwater Biology

Edited by P.S.Maitland

Volume 3, 1973

Blackwell Scientific Publications
Oxford, London, Edinburgh and Melbourne

Published by
Blackwell Scientific Publications
Osney Mead, Oxford

Printed and bound in Great Britain by
Adlard & Son Ltd, Bartholomew Press, Dorking

CONTENTS

VOL. 3, NO. 1, FEBRUARY 1973

1 *G.Wayne Minshall and Douglas A.Andrews:* An ecological investigation of the Portneuf River, Idaho: a semiarid-land stream subjected to pollution

31 *B.A.Manny and R.G.Wetzel:* Diurnal changes in dissolved organic and inorganic carbon and nitrogen in a hardwater stream

45 *Peter F.Credland:* A new method for establishing a permanent laboratory culture of *Chironomus riparius* Meigen (Diptera: Chironomidae)

53 *J.F.Talling, R.B.Wood, M.V.Prosser and R.M.Baxter:* The upper limit of photosynthetic productivity by phytoplankton: evidence from Ethiopian soda lakes

77 *N.Murugan and K.G.Sivaramakrishnan:* The biology of *Simocephalus acutirostratus* King (Cladocera: Daphnidae)—laboratory studies of life span, instar duration, egg production, growth and stages in embryonic development

85 *Johnstone O.Young and Jane H.Harris:* Another instance of haemoglobin in a flatworm (*Phaenocarpa typhlops* Vejdovsky 1880)

89 *C.S.Reynolds:* The seasonal periodicity of planktonic diatoms in a shallow eutrophic lake

VOL. 3, NO. 2, APRIL 1973

111 *Davis L.Findley, Diane I.Findley and Janet R.Stein:* Surface nitrogen and plankton in Skaha Lake, British Columbia (Canada)

123 *Patrick Denny:* Lakes of south-western Uganda. II. Vegetation studies on Lake Bunyonyi

137 *David L.Tillman and James R.Barnes:* The reproductive biology of leech *Helobdella stagnalis* (L.) in Utah Lake, Utah

147 *John E.Bishop:* Observations on the vertical distribution of the benthos in a Malaysian stream

157 *M.P.Brooker and R.W.Edwards:* Effects of the herbicide paraquat on the ecology of a reservoir. I. Botanical and chemical aspects

177 *G.G.Winberg, A.F.Alimov, V.V.Boullion, M.B.Ivanova, E.V.Korobtzova, N.K. Kuzmitzkaya, V.N.Nikulina, N.P.Finogenova and M.V.Fursenko:* Biological productivity of two subarctic lakes

199 *John E.Brittain:* The biology and life cycle of *Nemoura avicularis* Morton (Plecoptera)

VOL. 3, NO. 3, JUNE 1973

211 *L.W.Wood and K.E.Chua:* The relationship between natural concentrations of labile solutes and their energy content

219 *L.G.Willoughby and Jane F.Archer:* The fungal spora of a freshwater stream and its colonization pattern on wood

241 *J.-W.Haeckel, M.P.D.Meijering und H.Rusetzki: Gammarus fossarum* Koch als Fallaubzersetzer in Waldbächen. Schlitzer produktionsbiologische Studien (5)

251 *Kathleen Lewis:* The effect of suspended coal particles on the life forms of the aquatic moss *Eurhynchium riparioides* (Hedw.) I. The gametophyte plant

259 *P.A.Cranwell:* Chain-length distribution of *n*-alkanes from lake sediments in relation to post-glacial environmental change

267 *H.L.Golterman:* Deposition of river silts in the Rhine and Meuse Delta

283 *R.S.Wilson and P.L.Bright:* The use of chironomid pupal exuviae for characterizing streams

303 Book Reviews

VOL. 3, NO. 4, AUGUST 1973

309 *R.G.Pearson, M.R.Litterick and N.V.Jones:* An air-lift for quantitative sampling of the benthos

317 *H.Casey and Patricia V.R.Newton:* The chemical composition and flow of the River Frome and its main tributaries

335 *J.F.Talling:* The application of some electrochemical methods to the measurement of photosynthesis and respiration in fresh waters

363 *Winifred Pennington (Mrs. T.G.Tutin):* The recent sediments of Windermere

383 *M.P.Brooker and R.W.Edwards:* Effects of the herbicide paraquat on the ecology of a reservoir. II. Community metabolism.

391 *Kathleen Lewis:* The effect of suspended coal particles on the life forms of the aquatic moss *Eurhynchium riparioides* (Hedw.). II. The effect on spore germination and regeneration of apical tips

397 *Margaret Palmer:* A survey of the animal community of the main pond at Castor Hanglands National Nature Reserve, near Peterborough

VOL. 3, NO. 5, OCTOBER 1973

409 *William T.Mason Jnr, Cornelius I.Weber, Philip A.Lewis and Elmo C.Julian:* Factors affecting the performance of basket and multiplate macroinvertebrate samplers

437 *D.W.Sutcliffe and T.R.Carrick:* Studies on mountain streams in the English Lake District. I. pH, calcium and the distribution of invertebrates in the River Duddon

463 *J.M.Edington and R.Alderson:* The taxonomy of British pstchomyiid larvae (Trichoptera)

479 *R.C.Muirhead-Thomson:* Laboratory evaluation of pesticide impact on stream invertebrates

499 Book Reviews

VOL. 3, NO. 6, DECEMBER 1973

503 *P.J.Meynell:* A hydrobiological survey of a small Spanish river grossly polluted by oil refinery and petrochemical wastes

521 *P.Calow:* Gastropod associations within Melham Tarn, Yorkshire

535 *B.R.Allanson:* The fine structure of the periphyton of *Chara* sp. and *Potamogeton natans* from Wytham Pond, Oxford, and its significance to the macrophyte-periphyton metabolic model of R.G.Wetzel and H.L.Allen

543 *D.W.Sutcliffe and T.R.Carrick:* Studies on mountain streams in the English Lake District. II. Aspects of water chemistry in the River Duddon

561 *D.W.Sutcliffe and T.R.Carrick:* Studies on mountain streams in the English Lake District. III. Aspects of water chemistry in Brownrigg Well, Whelpside Ghyll

573 *J.D.Thomas and P.J.Ratcliffe:* Observations on the limnology and primary production of a small man-made lake in the West African savanna